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THE KEYSTONE

Defender

5 No. 6

STATE COUNCIL OF CIVIL DEFENSE, HARRISBURG, PA.

JUNE, 1956

RED CROSS-TRAINED PERSONNEL

THE QUESTION of releasing names of Red Cross-trained personnel to Civil Defense has arisen recently and was the subject of a recent letter issued by the Eastern Area Office, American Red Cross, to Chapter Chairmen.

The policy stated as follows:

"(1) When a class is organized by Civil Defense and trained by the Red Cross at the specific request of Civil Defense, the names of those persons who successfully complete the course should be submitted by the chapter to the local Civil Defense organization.

"(2) In the regular Red Cross training classes which have not been initiated at the specific request of Civil Defense, but which are of interest to Civil Defense, the names of those persons who successfully complete the course may be submitted as potential trained volunteers to the local Civil Defense organization upon its request. Instructors should be advised to inform the class of the close working relationship between the Red Cross and Civil Defense and that it is standard procedure to submit the names of those successfully completing Red Cross courses to Civil Defense as potential trained volunteers. In the conduct of its training courses the Red Cross will encourage individuals to participate, when trained, in Civil Defense; however, any class member who does not wish his name released shall advise the instructor and his name will be withheld by the chapter.

"(3) With respect to the names of persons who have previously received Red Cross training which is of interest to the local Civil Defense organization, the chapter may release the names of those persons who have suc-

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ON PROTECTIVE CLOTHING

THE SUBJECT of protective clothing to be used in the event of a nuclear attack has been discussed widely. Dr. Richard Gerstell, State Director of Civil Defense, has asserted repeatedly that "special protective clothing" was not thought to be feasible.

Now the Federal Civil Defense Administration has issued an Advisory Bulletin which supports the view of Dr. Gerstell. We quote from the Bulletin:

"It is not possible to design clothing for shielding against neutron and gamma radiation, since an individual would be incapable of carrying the weight of material required to give significant protection. Clothing does provide protection against beta radiation, but special types are not required. Heavy shoes, gloves, and ordinary, fairly heavy clothes, covering a maximum area of the body, are sufficient. For protection against thermal radiation, light-colored, loose-fitting clothes are advantageous, but, again, no special fabrics or materials are required."

It was also pointed out in the bulletin that, even if special clothes were purchased, it would not be likely that such clothing would be handy at time of need. Civil Defense workers should, if possible, following a bombing, wear heavy shoes and clothing, and gloves, or the clothing usually worn in specialized tasks such as rubberized clothing.

"Clothing to protect the general public against the effects of nuclear and thermal radiation, therefore, is of negligible value, and is wasteful of production facilities and material. Promotion of the sale of such clothing appears, in many cases, to take advantage of public misinformation on its value."

Michigan Tornado Facts

A Ground Observer Corps station 10 miles south of Grand Rapids first sighted the funnel. . .

Within ten minutes after the tornado struck Standale, 20 civil defense workers were on the scene. . .

Four Michigan rescue trucks were at hand within a couple hours. . .

Civil Defense provided ambulances, rescue, communications, assisted Red Cross and Salvation Army in providing housing and food. . .

Was the Civil Defense effort there worth the time?

J. E. Griffin, Acting Director of Michigan Civil Defense also had this warning to others:

"Civil Defense switchboards were flooded with calls volunteering shelter, food, clothing, blood and just plain help. . . . When there is suffering, we all want to pitch in and help.

". . . Too often this volunteer aid is of little practical value during the first stages of disaster. . . . Emergency services can be provided quickly and effectively only when these services are organized and trained into units."

Moral: You can't organize *after* the bomb is dropped.

Conelrad Stickers

Now civil defense directors can obtain Conelrad stickers to help their citizens remember the importance of 640 and 1240 on the radio dial.

The stickers, manufactured by FCDA, are assigned for fastening on radio sets. On plastic sets, however, special adhesive is required as the gummed tape does not adhere to plastic.

In addition to the Conelrad frequencies, the label has the familiar letters "CD" in the center.

Small supplies of these stickers have been mailed to county and larger community civil defense directors. Additional may be secured through the State Council of Civil Defense.

RAIL TRANSPORTATION

TWO EXCELLENT, colorful booklets on defense problems have been released recently by the Association of American Railroads. These booklets are titled: "Rail Transport and the Winning of Wars" by General James A. Van Fleet, and "Railroad Planning for Defense . . . A Guide."

General Van Fleet's experiences in Korea furnish much of the material from his "Rail Transport" booklet. Chapters in "Railroad Planning" include such subjects as Responsibility for Defense Planning; Advance Planning to Minimize Damage from Enemy Attack; Defense Against Espionage and Sabotage, and Recovery after Attack.

Address of the Association is the Transportation Building, Washington 6, D. C.

Sample copies of these booklets have been mailed to county C.D. directors.

C. A. P. — C. D. EXERCISE

THREE field hospitals and two mess units were air-lifted into Indiantown Gap Military Reservation during a combined Civil Air Patrol—Civil Defense exercise held May 5th and 6th.

The exercise planned by Colonel Philip Neuweiler, Pennsylvania Wing Commander of the Civil Air Patrol, included an air-lift of medical equipment. The field hospitals set up at Indiantown Gap were carefully and, from reports, effectively camouflaged.

Feeding units came from Berks County and Lehigh County. An estimated 500 persons participated in the exercise.

COMMONWEALTH OF PENNSYLVANIA STATE COUNCIL OF CIVIL DEFENSE

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Commissioner, Pennsylvania State Police
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Secretary of Welfare

DR. RICHARD GERSTELL, *Director*

Free subscriptions to this publication may be obtained by contacting your local civil defense director. Local civil defense directors write to: State Council of Civil Defense, Quakertown, Penna.

EMERGENCY FOOD

AN OUTSTANDING example of industry's aid to Civil Defense is the emergency organization of the food industry committee in the southeastern Pennsylvania area.

Organized under the direction of Pliney E. Hartenstein, Executive Director of the Committee, this is designed to cooperate with both the American Red Cross and Civil Defense during natural or man-made disasters.

The plan is basically simple. The food industry itself has designated coordinators, who, representing the largest food chains, will requisition emergency supplies at the call of Civil Defense and Red Cross Directors from warehouses of the area.

Samuel Gould, Assistant to the President of American Stores Company, has been named as chairman of this organization, which has been called the Food Industry Disaster Committee. Mr. Gould has named a Food Coordinator in the counties of Bucks, Chester, Delaware and Montgomery and four coordinators for the City of Philadelphia (one for each Civil Defense region). Each of these food coordinators is a chain store executive. Serving with the committee are representatives of dairies, bakeries and the meat industry. Requisition forms are being drawn up and will be placed in the hands of Civil Defense and Red Cross officials and food coordinators for use during emergencies.

Mr. Hartenstein, in addressing members of the Delaware Valley Civil Defense Federation, emphasized that this system, if followed carefully by Civil Defense and Red Cross officials will prevent duplication of orders for food since all requests will be channeled through a county food coordinator who is a part of the food industry.

Stated simply, the flow of food will be by request of Civil Defense or Red Cross from chains, co-ops, wholesale grocers, bakeries, milk depots and meat plants to mass feeding stations, with the requisition forms eventually ending up in the central committee office for audit.

Erie First Aid Plan

OFFICIALS of Erie County Civil Defense issued, recently, a comprehensive plan, entitled, "First Aid Service Operations Procedure." This was issued by Dr. William Lamberton, Deputy Director of Medical Services and William Lazarow, Chief of First Aid Services.

Welfare Chief Honored

A FEATURE article in the Harrisburg Sunday Patriot News recently described the work of Mrs. Adair C. Knox, Mechanicsburg, R. D. 3, Welfare Director of York County Civil Defense.

According to the article Mrs. Knox has travelled 5,200 miles filling speaking engagements and meetings as part of her job. This in addition to work carried on in her office (which is, incidentally, an old springhouse built around 1796). All of this work is performed as a volunteer.

Mrs. Knox also instructs and demonstrates how to set up new mass care centers, a program directed by Mrs. Gweneth Zarfoss of the State Council of Civil Defense.

G.O.C. Supported

A RESOLUTION was adopted during a May meeting of the Mountain Chapter of the Pittsburgh Region, Pennsylvania Railroad Family Members' Club, to support the Ground Observer Corps program. The resolution followed an address by Colonel Harry W. Shoup. The resolution follows:

"The Mountain Chapter of the Pittsburgh Region of the Pennsylvania Railroad Family Club hereby resolves that the defense effort of these United States, specifically the Air Defense Mission of the United States Air Force, shall not be weak, where we as individuals and a group can make it strong. We do hereby dedicate ourselves to participate in the Ground Observer Corps and Civil Defense whenever and wherever we can."

Berks "Operation Tags"

EARLY in May the Berks County Civil Defense Council launched "Operation Tags," a program to distribute identification tags to 60,000 school children of the county. The Council emphasized it will also distribute tags to interested adults.

The tags were sold for 25¢ each, list the name, address, next of kin and religious faith of the wearer. The information is punched on plates by a machine recently purchased by the Council and operated in the Civil Defense Office, Court House, in Reading.

The "graphotype machine" was purchased by the Berks County Council along with an initial supply of blank tags and chains at a cost of \$1200.00.

The value of wearing identification tags was demonstrated following the August 1955 floods in the Commonwealth. Identification of disaster victims is often impossible without such tags.

THE BELL-AND-LIGHT SYSTEM

ONE OF THE finest automatic air raid warning systems in the world is in operation in the Commonwealth of Pennsylvania, familiarly known as the Bell-and-Light System, costing about \$125,000 for installation and about \$100,000 per year service charges.

This system is comprised of 15 networks and allows for transmission of yellow, blue, red and white alerts within seconds into practically all counties of the Commonwealth. Before the purchase of this system, Pennsylvania State Police radio and a general telephone system was used for dissemination of air raid alerts. This old system required from 15 to 20 minutes to get the warning into all counties.

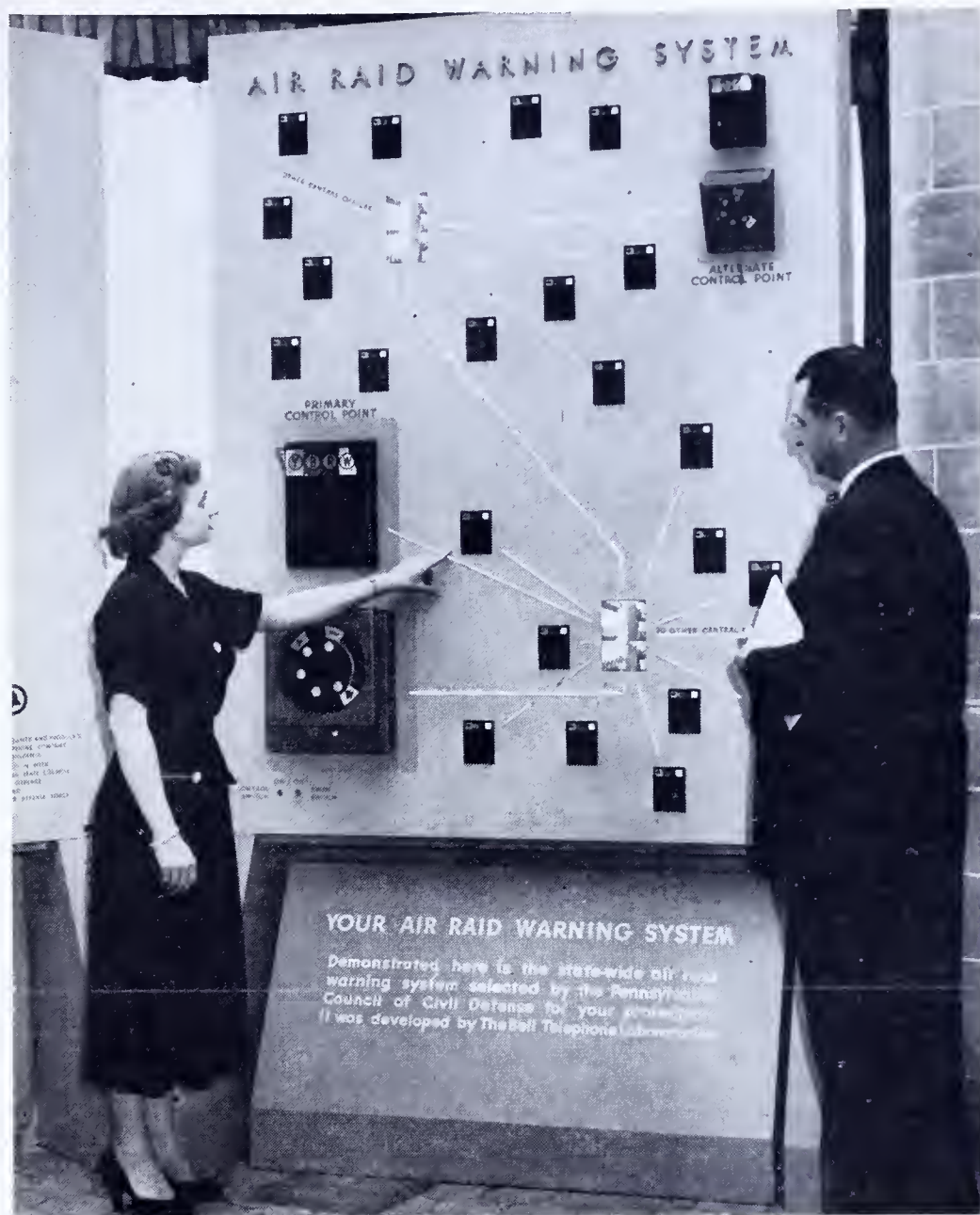
The warning of any impending attack would pass from United States Air Force to the 15 key points in the Commonwealth over special private line facilities. From here the Bell-and-Light System begins to function. A twist of the dial sends out the warning. It is interesting to note that this system operates on special batteries and is independent of commercial power. The lamps in the station signal sets are "cold cathode" tubes and do not burn out. Circuits between cities are under continual pressure tests so that if trouble develops in the line an automatic alarm sounds in the nearest telephone company headquarters.

The State Council of Civil Defense has installed and paid for Bell-and-Light signal sets in many Civil Defense Headquarters, police headquarters, fire headquarters, hospitals, state police barracks and similar public institutions in so far as funds and policy permit. Public utilities' companies, industrial concerns and like organizations may connect to the council's network at their own expense. Many have taken advantage of this. Also, some local communities have connected their circuits to the Bell-and-Light System at community expense.

County and local Civil Defense directors were asked in a letter dated June 8, 1953, by the State Council to visit bell-and-light installations in their districts. Dr. Richard Gerstell said in that memorandum:

"The purpose of this visit would be to explain the operation of the Bell-and-Light System and to help the subscriber develop a sound civil defense plan to be put into effect in the event of an alert."

Recent inspections have indicated that some county and local directors



have not taken advantage of this opportunity with the result that in some cases the bell-and-light receiving stations are not being used to the fullest extent. The possibilities of using this Bell-and-Light System to assist in county and local "fan out" should not be overlooked. Each director should remember constantly that the Bell-and-Light System carries out the Commonwealth's obligation to disseminate warnings promptly and efficiently to counties of the Commonwealth but this does not necessarily mean that all communities of the Commonwealth are thus alerted. Added effort on the part of county and local civil defense directors must necessarily be made to insure a completely efficient air raid warning for the general public.

Each bell-and-light station in turn has its part to play in perfection of this outstanding air raid warning system. Each station was told in a memo-

randum issued by the State Council of Civil Defense at time of the installation of this system:

"It is expected that some reliable individual will be assigned responsibility" and that "all individuals likely to be in position to see or hear" the bell-and-light air raid warning "will be informed so that they know what to expect."

Each station should have a log book and record should be kept of all soundings including Monday morning tests even if log is no more than a simple notebook. At any time of failure, report should be made promptly to the local telephone company. No charge is made for report of such troubles.

It is also important that each station have a fan-out plan. This may best be explained by giving examples. A warning is received by bell-and-light at a hospital hooked on to the system. The switchboard operator, or whoever the bell-and-light attendant

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MEDICAL CIVIL DEFENSE

By ARTHUR B. WELSH, Medical Coordinator, State Council of Civil Defense

HERE IS the problem in brief—An all out enemy attack on this country could produce a tremendous number of casualties—dead and injured—in a matter of seconds. The present planning figures on a national scale which some believe are low are that some 8,200,000 injured persons will survive for 24 hours after such an attack. Of these survivals something like 40% or approximately 3,500,000 will require hospitalization for twenty-four hours and longer. Pennsylvania may have more than its share of casualties based on population strengths because of the importance of its critical target areas and target areas components. It has been estimated that Pennsylvania as the result of an all out attack on its target areas will sustain about one million casualties— $\frac{1}{3}$ killed and $\frac{2}{3}$ surviving at end of 24 hours; $\frac{1}{3}$ ambulatory, $\frac{2}{3}$ (400,000) requiring hospitalization (200,000 — extensive cases, 200,000 — moderate cases). That is the medical task facing us in *Civil Defense* as a nation and as a state. We also have the Public Health problem of caring for millions of evacuees—in an environment complicated by radioactive fall-out.

We must assume that if the United States is attacked, the principal weapons will be nuclear and thermonuclear ones. We also must expect the attacker to use chemical, biological, and radiological warfare. Any type of attack, too, will be accompanied by attempts at sabotage of industry and communications. From such attacks survivors will suffer chiefly from burns, blast, and traumatic injuries as well as from radiation, chemical and biological wounding.

We as a nation and including Pennsylvania will exist if we are too tough to tackle.

We will perish if we are too weak or unready.

We must not forget that in addition to the 8.2 million persons injured in an all out attack we as a Nation would sustain several million American dead as well as lose much of our industrial potential.

Who is responsible for providing the required medical and health services? Are such services as now provided adequate to handle the job?

The Civil Defense Medical Responsibility at Federal level is a dual one as presently conceived. The care of casualties (first aid, evacuation, hospitalization, medical supply, personnel,

and medical care and planning, policy) remains a function of the Federal Civil Defense Administration. The health aspects of civil defense is by delegation a responsibility of the U. S. Public Health Service. The latter includes Chemical, Biological and Radiation defense.

The Kefauver Committee in 1955 warned that the United States is in a state of total unpreparedness for an H-bomb attack. Its conclusion, with reference to medical planning, largely reflected testimony it took from Dr. Paul R. Hawley, Executive Director of the American College of Surgeons. The Kefauver Committee recommended that "the appropriate Federal Agency" be given responsibility for planning mass medical care and organizing national medical resources for emergency mobilization. The same defect of medical unpreparedness was also pointed out in February 1955 by a task force of the Hoover Commission in an exhaustive report on Federal Medical Services. The Sarnoff Report which was presented by Governor Harriman to the forty-seventh Annual Conference of Governors in 1955 said Civil Defense "is today the weakest link in our chain of preparedness." Perhaps the most recent favorable sign came shortly after "Operation Alert 1955" when President Eisenhower declared a state of mock Federal Martial Law and placed disaster operations in the lap of the Secretary of Defense—Mr. Charles Wilson. On Operation Alert 1956 the FCDA, the Department of Defense, and the Office of Defense Mobilization will cooperate more closely than ever.

The Kefauver interim report, previously referred to, also, recommended that the executive branch resolve and clarify the question of what role, if any, the Armed Forces will assume in the civil defense program.

A Federal Unit has since been formed for Medical Disaster planning in implementation of the Hoover Commission recommendation. The

first meeting of that unit was held September 1, 1955 at the Pentagon under the Chairmanship of Dr. Cushing of the Department of Defense. Represented in the unit are the Armed Forces, the Public Health Service, the Federal Civil Defense Administration, the Veterans Administration, and the Office of Defense Mobilization. Its task is to develop a system for delegating operational authority to direct and provide medical care in time of national catastrophe. The unit has recommended the designation of one operating head for the Medical Services of our country. I am not aware of any decisions having been made as a result of that recommendation.

This subject is receiving increased attention at Federal, State and local levels. On September 21, 1955 at Atlantic City, the American Hospital Association was advised to begin to plan for the care of our wounded and dying civilians under the primitive conditions likely in a hydrogen bomb attack rather than thinking in terms of shiny modern hospitals. The delegates were reminded that the seventy leading target areas of our country contained 42 percent of the nation's hospital beds and 25% of the country's hospitals, which could be destroyed along with other buildings. Sixty percent of the Nation's physicians, nurses, and other hospital personnel are also in the prime target areas and could be killed or incapacitated by an all out atomic attack.

Dr. Charles S. Lentz, hospital consultant of the Health Office of the Federal Civil Defense Administration told the American Hospital Association "The time has come when the Association and its components must realize that the day of individual hospital disaster plans for activation following enemy attack is futile and unrealistic." He advocated, instead, a nation-wide hospital system with local adaptation. Such a system, borrowing battlefield techniques of evacuation, dispersal of hospital equipment and personnel, and transportation of casualties to designated assembly and rendezvous points—involves regional and national planning and cooperation.

This is feasible. However, it requires centralized medical regulation of patient flow on a scale many times greater than in World War II. No decisions have been announced based upon the remarks of Dr. Lentz.

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CENTRAL AREA

TELEPHONE CHANGE

Directors of the Central Area, State Council of Civil Defense are reminded of the new telephone number of Central Area Control Center: Lewistown 8-0101.

The change was announced recently by J. Robert Stimmel, Central Area Director.

What is State Policy?

V. Duly Enrolled Personnel

THE State Council of Civil Defense recently placed three requirements on all Civil Defense organizations of the Commonwealth before a worker may be classified as "duly enrolled". The requirements were:

1. Administration of the loyalty oath.

2. Issuance of identification cards.

3. Preparation of enrollment lists.

It will be noted that the individual who arises spontaneously following a disaster and furnishes assistance without meeting these three basic requirements is *not* eligible to receive compensation benefits for accidental injuries sustained while engaged in authorized Civil Defense and disaster training tests and operational activities. Because of the requirements of the new Commonwealth law (Act No. 135) Civil Defense Directors of all political sub-divisions now owe it to their faithful, hard-working volunteers to have good administration.

For careless make-shift administration may result in a volunteer losing protection to which he is entitled. Remember the volunteer is not protected until the three requirements enumerated above are met.

Dr. Richard Gerstell, State Director of Civil Defense, pointed out in Information Circular No. 70, issued recently, that the State Council has taken steps to simplify matters for Civil Defense directors; for example, authorization to administer loyalty oaths without charge has been given to many civil defense officials. Identification cards and enrollment lists have been prepared by the State and distributed to civil defense organizations. Enrollment lists are only required to be forwarded to the State Council twice yearly, although names must be entered on these lists at the time additional persons are enrolled.

Civil Defense directors should inform volunteers in their areas of the basic requirements of law. Certainly it is not wise to wait until some unfortunate accident occurs.

The Equipment Problem

A NEED for at least a small stockpile of personal equipment, such as hard hats and arm bands, was apparent to civil defense directors who operated during last summer's floods.

The reason? Many persons mislay issued equipment.

Some directors have made a policy of issuing such equipment only for tests, exercises and operations, recalling upon demobilization.

BELL-AND-LIGHT

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may be, should have a call book on hand listing all emergency numbers to be called in such event. Certainly these numbers would include the hospital civil defense director, the doctors and nurses and necessary key employees and such other names as the local civil defense director may submit. Similarly, receipt of warning at a bells station should be a signal for fan-out to such persons as the county or local civil defense director may suggest. It is also practical and necessary for these bell-and-light receiving stations to be used as part of a mobilization plan.

The new public warning signals in the Commonwealth do not mean that the Bell-and-Light System is in any way out-dated. The same signals will be utilized to transmit warnings to civil defense directors. The new system merely means that there is more responsibility and judgment at the local level to determine whether the "take cover" or "alert" warning will be used for the general public.

It is suggested strongly that county and local civil defense directors revisit all bell-and-light installations in their districts and that full use be made of each signal station. Any instances of lack of cooperation should be reported promptly to the State Council. The Bell-and-Light System is an important phase of the civil defense program and in the best public interest full use must be made of it.

New RACES Officials

ROBERT BLACKBURN, W3MPO, formerly Western Area Radio Officer moved up to the post of State Radio Officer effective June 1, 1956. He succeeds Charles Landis, W3UA, who will continue to serve as Junior Deputy State Radio Officer.

Paul Mercado, W3FBF, formerly Eastern Area Radio Officer, was named to fill the post of Senior Deputy, State Radio Officer. This post is newly created.

Named to succeed Blackburn in the Western Area was Charles S. Garrigus, W3NRU. Mercado's successor in the Eastern Area is Wally Blakslee, W3BGR.

The Central Area Radio Officer is now Boyd Miller, W3HUL. Other members of the State Board include L. K. Jones, W3CTN; Robert R. McClain, W3VRZ; Arden B. Hopple, W3DJZ; Nelson K. Stover, W3BBV; Dr. John A. Rose, W3UKF, and Clinton R. Spencer, W3QQH.

HOSPITAL PLAN

Planning is an essential part of successful response to major disasters. Such planning is a hospital requirement.

The hospital disaster plan—the end product of hospital and medical staff disaster committee planning—is *not complete* until it has been integrated with the local civil defense organization's overall plan for handling disaster.

The following references should be most helpful to hospital administrators and to civil defense directors in accomplishing such planning at community level:

"Principles of Disaster Planning for Hospitals" published by the American Hospital Association and purchasable.

"Readings in Disaster Planning for Hospitals" published by the American Hospital Association and purchasable.

"Hospital Disaster Plan Check List" The Pennsylvania Medical Journal, April 1956—page 487.

"The trustees, administrator, and medical staff of every hospital should jointly work out a disaster plan for their hospital, as a natural part of its day-by-day obligation within its own community to be prepared for any type of disaster, even the dramatic threat of atomic attack", according to the American Hospital Association's Committee on Disaster Planning.

Welcome, New Directors!

WESTERN AREA

Mr. Aaron Bernstein, North Main Street, Chicora, Pa.; Dr. Arthur B. Foster, 2632 Wilmington Road, New Castle, Pa.; Mr. Joseph Beltz, Claridge, Pa.; Mr. J. Robert Singleton, Shanksville, Pa.; Mr. Richard E. Gnesda, Adamsburg, Pa.

CENTRAL AREA

Mr. William Wheldon, 323 Main Street, Lilly, Pa.; Mr. Edward T. Rudy, R. D. #1, Linglestown, Pa.; Mr. Harry Maurer, 718 Wilhelm Road, Harrisburg, Pa.; Mr. R. H. English, 712 Powell Ave., Cresson, Pa.; Rev. Glenn Ball, Mounted Route, Cavalry Road, Carlisle, Pa.; Mr. Stanley E. Walker, 56 Taylor Blvd; Harrisburg, Pa.; Mr. John Schade, Market Street, Berrysburg, Pa.; Mr. Charles E. Wray, 1101 Walnut Street, Sunbury, Pa.; Mr. William B. Lowe, Fawn Grove, Pa.

EASTERN AREA

Mr. Joseph E. Cobb, R. D. #1, Waymart, Pa.; Mr. W. Kenneth Bryant, R. D. #1, Honesdale, Pa.; Mr. Eugene T. LaTournous, General Delivery, White Mills, Pa.; Mr. Gabriel Kovacs, R. D. #1, Macungie, Pa.

MOBILE CANTEENS STAND READY



THE PHILADELPHIA CIVIL DEFENSE Council and The Salvation Army have agreed upon an emergency and disaster program.

Conferences were held between the two organizations to determine how coordinated efforts might be most effective. Leading these conferences were Philip Klein, Philadelphia Civil Defense Executive Director, and Lt. Col. John Grace, Divisional Commander of The Salvation Army for southeastern Pennsylvania.

As a result of these meetings two Salvation Army commissioned officers were assigned to each of the several Civil Defense "regions" of the city. These officers have authority to call upon resources of The Salvation Army to be directed to any point of need. One officer and his alternate stationed at the central control point co-ordinates the series of requests so that each region will know facilities that are readily available. The Divisional Commander will go to the point of greatest need and direct The Salvation Army operations.

Pictured above are the mobile canteens available for competent execution of The Salvation Army's part in the above plan. Hundreds of volunteers have been trained to drive vehicles, prepare and serve food and to sort and direct clothing and supplies to points of distribution. Other homes of Salvation Army volunteers are available as drop-off points for needed emergency supplies at points convenient for pickup trucks. All Salvation Army volunteers get train-

ing through the regular program of emergency services at major fires and daily servicing of United States Army anti-aircraft installations that surround Philadelphia.

Mayor Richardson Dilworth, Philadelphia Civil Defense Director, and Philip Klein, his executive, recently presented "a certificate of appreciation" to The Salvation Army in recognition of special services rendered. Representatives of The Salvation Army regularly attend meetings of the Philadelphia Civil Defense Council and report the proceedings back to Army officials. One of the civilian staff of the Army has attended a course in mass feeding at Fort Lee, Virginia.

At time of a Civil Defense alert, Salvation Army canteens, busses, trucks and station wagons are deployed in accordance with modern defense techniques. The divisional headquarters of the Army, which maintains a 24-hour schedule, is also equipped with a Bell-and-Light warning system as recommended by the State Council of Civil Defense.

July Defender

A Roundup of the June "Surprise Alert."

Facts about the new rural light-duty rescue truck.

Please inform the DEFENDER of changes in address.

WARREN C. D. CALLED OUT AGAIN

FOR THE SECOND time within six months Warren County's Civil Defense organization was called out to serve during a natural disaster. A disastrous fire swept through the Carver Hotel there April 24th, resulting in several deaths and complete destruction of the building.

Ross I. Webb, Western Area Civil Defense Director, reported that ten fire companies were called and that Civil Defense was finally pressed into service. An information and registration center was set up in an insurance office across the street from the hotel staffed by Carl Whipple, Mrs. Folmer Yerg and Mrs. Martha Baker. The Civil Defense medical division assisted in treatment of casualties and the Civil Defense Control Center was open. As reported in the April issue of *Keystone Defender*, Warren County Civil Defense also was called into action during an Allegheny River flood in March.

MORE ON TORNADOES

IN TOPEKA, Kansas, on May 11 the air raid sirens sounded in a tornado alert. The result was described as "one hundred thousand people in a hubbub. . . . The fact that few citizens knew what to do was indicated by the many telephone calls that swamped the Weather Bureau, police headquarters, newspaper offices and radio stations."

Meanwhile, the Detroit Free Press reminded subscribers that for \$40 and a dime any family can be protected. They say: "The dime is for the do-it-yourself booklet put out by Uncle Sam—the \$40 is for materials."

The book referred to by this paper is "Lean-to Shelters"—available free at nearly any Civil Defense office. This shelter has been described by Dr. E. Wendell Hewson, Professor of Meteorology at the University of Michigan as the "greatest thing I know for protection against tornadoes."

RED CROSS

(From Page 1)

cessfully completed training to the local Civil Defense organization as potential trained volunteers, but should indicate the date of the training in order that it may be more meaningful to the local Civil Defense organization."

The above policy was issued in a spirit of cooperative relationship and the common aim of both organizations to prepare communities.

THE BRITISH VIEW NUCLEAR WEAPONS

(As reported by NATO Civil Defence)

MR. LEONARD BERTIN, Daily Telegraph Science Correspondent, has reported on the publication of the first of a new series of Civil Defence training manuals, issued by the Home Office and entitled "Nuclear Weapons", as follows:

A new air raid warning system is being developed by the Home Office to protect people against radioactive dust in the event of an H-bomb attack. It will be nation-wide and will apply to rural areas as well as towns. Its purpose will be to tell people to "go home and stay at home until we say it is safe to come out again."

Gen. Sir Sidney Kirkman, Director-General of Civil Defence, announced this at a Press conference yesterday. He was commenting on the issue today of the first of a new series of Civil Defence training manuals.

He said the public would have to stay indoors "under the strictest discipline". They must be made to realize that "for them it will be a matter of life or death, and that they must comply of their own accord. We cannot endanger the lives of police and troops to make them."

People who went in the open in spite of warnings might be ill for three months if they did not die from the effects of radiation sickness.

Priority is now being given, he added, to the perfecting arrangements to measure local contamination and to anticipate some time ahead, after a bomb has burst, the direction in which danger clouds are moving.

This would give farmers a chance to gather their livestock into shelter. It would also give those who needed it the chance to get in additional food. (Editor's Note: Studies on this same problem are under way in this country).

The warning system will be based on messages sent in from members of the Observer Corps. Their services have been made available to the Home Office by the RAF.

The corps already has observation posts at intervals of 15 miles throughout Britain. They have dug in telephone lines.

Dr. R. H. Purcell, chief scientific adviser to the Home Office, said there was sufficient equipment for the measurement of radioactive contamination for all these posts. Up till now few of the posts have been dug in.

The decision on when this will be

done rests with the Treasury. It would cost 240,000 pounds.

The new training manual describes what would happen if a hydrogen bomb were exploded over Britain and the measures that could be taken to lessen its effects.

A medium-sized bomb of this sort, it says, exploded over Central London would do irreparable damage to most of the London County Council area. It would cause severe or minor damage over the whole of the Metropolitan Police district.

If the bomb were exploded on a port in the west the radioactive contamination might stretch from coast to coast. There would be widespread casualties and damage to buildings by blast on a scale never before experienced.

Nevertheless, states the manual, an immense amount could be done to save life, to minimize fire damage and to lessen the hazard from all forms of radioactivity.

The new pamphlet, entitled Nuclear Weapons, with volumes that follow, will replace all existing training manuals. These had been based solely on the effects of ordinary high explosives and of atomic weapons of the sort used against Hiroshima and Nagasaki in 1945.

The picture the manual paints is a grim one. It is based on the effects to be expected from the explosion of a bomb with an energy yield equivalent to 10 megatons, or 10 million tons, of conventional explosive exploded at one point.

Such a bomb would be considerably smaller than one at least of the weapons already exploded by the United States Atomic Energy Commission in its Pacific tests. It would be 500 times as powerful as the "nominal size" bombs exploded over the Japanese cities.

A bomb of this size, says the pamphlet, might be expected to burn out a saucer-shaped crater one mile across. Earth and debris from this crater would probably bury all that was left of structures half a mile further out in every direction. Beyond this central area the damage would probably be as follows:

Over a radius of $3\frac{1}{2}$ miles beyond the crater—a complete covering of heavy debris:

$3\frac{1}{2}$ to 5 miles—heavy debris;

5 to 13 miles—light to heavy debris;

13 to 20 miles—glass and tile fragments.

Compared with the 1945-type bomb which caused lethal burns over a radius of half a mile the heat flash of a 10-megaton bomb would be lethal four miles away. Over an area of double this distance people would suffer charring of all exposed skin.

So much heat is produced by the bomb that people even 20 miles away might be blistered if in the open and unprotected. One of the worst effects, however, would be from the great amount of radioactive material produced which would persist for a long period.

With the first type of bomb the worst effects could be obtained by an explosion about 1,000 ft. above the ground. This was because the direct blast combined with a secondary wave reflected from the ground to give a far more damaging effect.

The residual radioactivity from such an explosion was of no practical significance. In the case of H-bombs, the blast and incendiary effects are so great that there is little advantage to be gained from an airburst explosion.

In the face of these facts, the scientists can only offer ways of mitigating the effects. In this, the size of the bomb is itself a factor.

With the Hiroshima bomb the heat-flash lasted only $1\frac{1}{2}$ seconds and gave no one chance to take cover. The "flash" from a hydrogen bomb might persist 20 seconds.

Thus people who at 16 miles might have suffered blistering could escape this damage by taking cover. Casualties at this distance through splintering glass and flying tiles might be almost completely avoided.

In the same way the blast wave that took only 20 seconds to reach casualties on the periphery of the Japanese explosions would take more than a minute to travel 16 or 20 miles outwards from a hydrogen bomb. This should provide many people with a chance to take cover.

For various technical reasons that are outlined, experts do not believe that such an explosion would be characterized by the disastrous firestorm that occurred in Japan. There, winds rushing inwards from all directions fanned fires in the center until the heart of the city was an inferno.

Home Office experts believe that such bombs would therefore be made

(Cont'd next Page)

MEDICAL CIVIL DEFENSE

(From Page 4)

The above should give you a concept of the Medical workload and some idea of the existing Federal concern about finding a way to insure that at least a part of the task can be accomplished.

We, in Pennsylvania, are proud of our Civil Defense accomplishments. Of course, there are many shortcomings. We still have a long way to go. Our key to success is sound county organizations.

We have sufficient medical equipment unitized and stockpiled by our Pennsylvania State Council of Civil Defense to provide 1,600,000 treatments at first aid echelon level. We also have blood services equipment for approximately 300,000 donors and recipients. We have increasing evidence of leadership emanating from office of the Governor, the State Council, the State Health Department, the Pennsylvania State Medical Society, the Pennsylvania State Nurses Association, and other groups in Pennsylvania ancillary to the practice of medicine.

We must, however, continue to strengthen our medical organizational setup at state, area, and county levels. Medical manpower, mobile medical units, hospital facilities, expansion equipment, and medical supplies are and will continue to be extremely scarce commodities. Each will require stringent rationing under strong centralized federal, regional, and state control to insure that the Armed Forces, other governmental agencies, and civil defense do not suffer while civilian non-defense operations remain lush.

Civil defense medical training must be accelerated during the pre-disaster period—particularly in the field of casualty care services. We must train nurses, first-aid personnel, nurse aides, specialized technicians, and administration personnel for our aid stations, improvised hospitals, and Civil Defense Emergency hospitals.

We must insure that a Civil Defense medical care and health program is established in each of our counties and that such county programs are mutually supporting one with the other and definitely integrated into the Civil Defense organization.

We must coordinate our county medical plans with the plans of other civil defense technical services, such as rescue, communications, transportation, engineering, and welfare as well as with the military agencies within the area. The responsibility

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for the transportation of casualties must be clearly established.

It is the policy of the Pennsylvania Department of Health to integrate Civil Defense activities into existing Health programs and execute them through established channels, thus avoiding any duplication of personnel and effort—except such as are required for coordination throughout the Department and for liaison with the many other Medical and allied agencies involved in civil defense at Federal, State, and, local levels, particularly in the field of casualty care.

All of us can help in some way in overcoming the significant problems confronting the nation, state, and county in the accomplishment of the medical civil defense mission. The principal problems to be overcome are shortage of funds, insufficient trained and qualified personnel, public apathy, misconception, official inertia, and development of teamwork. These can be solved. To do it we must have active leadership, a sound organization with command and staff control, an accelerated pre-attack training program, greater decentralization and an increased stockpiling of equipment and supplies adequate for accomplishing the Commonwealth's casualty care and preventive medical programs.

Your Health Department has accepted this challenge. With the sincere support of each county civil defense organization; the County Medical society; the county health unit; and units ancillary to medicine—such as nursing, osteopathy and veterinary medicine—this challenge can be met. Support, too, must come from other State Departments in accepting and discharging their civil defense roles as defined by statute. State counterparts of National organizations—such as the AMA, ADA, ANA and AHA—must accelerate their medical and civil defense activities.

BRITISH VIEW

(From Page 7)

to explode on or near the ground. This, says the pamphlet, "raises an enormous additional threat of residual radioactivity from fall-out".

This hazard might occur not only in the main area of damage but also at great distances downwind in areas unaffected by blast, heat and immediate radioactivity. An explosion at Liverpool, for example, would contaminate Felixstowe.

Dealing with protection against fall-out, the manual emphasizes the need to remain under cover. It quotes from a United States atomic energy report on a ground level explosion. This showed that with the standard of protection afforded by an average two-story house in a built-up area, the majority of those in the contaminated area would have been saved from death, and even from sickness, by taking cover continuously for the first 36 hours.

Clothing afforded no protection. It would need a suit weighing several tons to produce a 50 per cent reduction in the dose, "so it is impossible to devise any 'protective' clothing to mitigate the effects of gamma radiation."

In a house, where on an average the center is about 12 ft. from the walls, a person standing in the middle would automatically suffer only one-third of the dose suffered by others outside in the open.

The conclusion is that in houses that have no cellars the best thing to do may be to cut a hole in a living-room floor and dig a slit trench in the earth beneath. "Once a trap door has been cut in the floor boards and the trench has been dug," say the manual, "there would be no further interference with peace-time use of the room."